UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,023	02/08/2002	Sunil K. Gupta	29250-000558	7214

30594 7590 01/08/2007	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195	TRAN, PHUC H	
	ART UNIT	PAPER NUMBER
	2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/068,023	GUPTA ET AL.
	Examiner	**Art Unit**	
	PHUC H. TRAN	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 October 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This communication is in response to the applicant' response filed 10/24/06. Claims 1-22 are pending in the application. Detailed action is followed:

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2.   Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Shlomot (U.S. Patent No. 6377931 B1).

       - With respect to claims 1,9,15 and 20, Shlomot teaches a system to compensate for the effects of packet delay on a voice over Internet protocol (VOIP) system, comprising:

       a buffer for receiving speech packets in the VOIP system (block 260 in Fig. 2, col. 4, lines 41-43);

a playback device for adjusting the playback speed of the received speech packets (blocks 232, 230 and 240 in Fig. 2);

and a buffer manager (270 in Fig. 2) for detecting packet jitter in the buffer and for sending commands to the playback device to adjust playback speed based on the detection (bridge paragraph between col. 4 & 5; col. 5, lines 14-33),

wherein the buffer manager measures a distance between an earliest point of detected packet jitter in the buffer and a reference point in the buffer (e.g. Fig. 3 shows the reference point as 320 and the distance as 330 and 310) and controls the playback device to increase or decrease the playback speed dependent on the measured distance (e.g. Fig. 3 shows the F and S, see col. 5, lines 44-67).

- With respect to claim 2, Shlomot teaches wherein the buffer is a queue for handling incoming speech packets (e.g. jitter buffer in Fig. 2), the buffer performing jitter buffering and packet sequencing on the received speech packets (col. 4, lines 38-41).

- With respect to claim 3, Shlomot also teaches wherein the buffer manager controls the playback device to decrease the playback speed when the buffer manager detects packet jitter that delays arrival of a speech packet (e.g. when the arrival of the packet from the network 100 is underflow, the buffer manager provides a slow-play signal to 280 in Fig. 2).

- With respect to claim 4, Shlomot discloses wherein the buffer manager controls the playback device to increase the playback speed when the delayed packet arrives at the buffer (e.g. when buffer manager receives overflow, it signals fast-play to 208 in Fig. 2).

- With respect to claims 5, 13 & 17, Shlomot further teaches wherein packet jitter is a variation in packet delay that causes packets to arrive out of sequence at an end-point in the system (col. 4, lines 19-22).

- With respect to claims 6, & 14, Shlomot teaches wherein an end-point is a client in the system (e.g. Fig. 1).

- With respect to claims 7, & 18, Shlomot also teaches wherein the buffer manager checks length of the buffer and instructs the playback device to increase playback speed until the length of the buffer returns to a nominal length, when the buffer manager determines that length of the buffer exceeds a specified length (e.g. depending on the level capacity of the buffer to increase or decrease the playback as Fig. 2).

- With respect to claims 8 and 19, Shlomot teaches wherein the buffer manager measures a distance between an earliest detected out of sequence (e.g. Fig. 4 A&B shows the packets into jitter buffer are out of sequence such as Fig. 4A packets between P4 and P5, P7, P8, P9 and Fig. 4B as P4, P5, P6, P7 and P8, P9) packet and a beginning of the buffer, and the buffer manager controls the playback device to decrease the playback speed when the distance between the earliest detected out of sequence packet and the beginning of the buffer is less than a given distance (e.g. the distance between N and S in Fig. 3 to create an underflow 267 and 269 in Fig. 2).

- With respect to claim 10, Shlomot teaches wherein the buffer manager includes silence compression means that uses silence periods that are received between speech packets in the buffer to restore the length of the buffer to a nominal length (col. 1, lines 33-35).

- With respect to claim 11, Shlomot discloses wherein the buffer manager compresses the

silence periods to return playback speed to a nominal speed (col. 2, lines 60-63).

- With respect to claim 12, Shlomot teaches wherein the buffer manager controls the

playback device to adjust speed by an amount that is dependent on an expected or observed

packet jitter (e.g. Fig. 2 shows that the buffer manager adjust the speed base on the overflow or

underflow of buffer jitter).

- With respect to claim 16, Shlomot teaches further comprising performing jitter

buffering and packet sequencing on the speech packets prior to performing the detecting step

(e.g. col. 2, lines 39-45).

- With respect to claim 21, Shlomot teaches further comprising the step of restoring the

length of a buffer storing the incoming speech packets to a nominal length, at a nominal

playback speed, instead of at a higher playback speed, thereby compressing any silence intervals

(col. 2, lines 48-51).

- With respect to claim 22, Shlomot teaches wherein the compressing step is performed

when silence suppression is enabled in the VoIP system (col. 1, line 43-46).

Response to Arguments

3.   Applicant's arguments filed 10/24/06 have been fully considered but they are not

persuasive.

In response to Applicant argument that Shlomot discloses a system whereby playback

speed is adjusted based on a comparison between the rate of packets arriving into the

buffer and a predetermined standard playback rate, rather than controlling playback speed

based on the measured (in page 6 of remarks). Examiner respectfully disagrees. Shlomot

teaches the buffer management monitoring the jitter buffer, which to control the playback

such as increase or decrease based on the overflow or underflow of the jitter buffer (see

e.g. Fig. 3 shows the reference point as 320 and the distance as 330 and 310; Fig. 3 shows

the F and S, see col. 5, lines 44-67). In the specification of present invention paragraphs

20-27, which teaches "the jitter buffer 100 has already reached the High Water Mark and

a burst of packets arrives before the system has had time to reduce the jitter buffer

length" so the arriving of packets in present invention also affect the playback as Shlomot

teaches in Fig. 3. Therefore, Shlomot teaches each and every feature of the claimed

inventions.

Conclusion

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

5.　　Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHI PHAM can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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P.t
12/27/06

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SUPERVISORY PATENT EXAMINER
1/4/07